

REMARKS

Reconsideration of the instant application is respectfully requested. The present amendment is responsive to the Final Office Action of July 18, 2006, and is submitted concurrently with a Request for Continued Examination (RCE). Claims 31-90 have now been cancelled, leaving claims 1-30 remain pending in the application. Of those, claims 1-30 have now been rejected under rejected under 35 U.S.C. §101 as being inoperative and lacking in utility. In addition, claims 1-30 remain rejected 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. For the following reasons, however, it is respectfully submitted that the application is now in condition for allowance.

Rejections under 35 U.S.C. §101

MPEP 2107, "Guidelines for Examination of Applications for Compliance with the Utility Requirement," states in section II (A)(3) that:

"If at any time during the examination, it becomes readily apparent that the claimed invention has a well-established utility, do not impose a rejection based on lack of utility. An invention has a well-established utility if (i) a person of ordinary skill in the art would immediately appreciate why the invention is useful based on the characteristics of the invention (e.g., properties or applications of a product or process), and (ii) the utility is specific, substantial, and credible."

The present application was filed back on August 2, 2002, at which time 90 claims were originally pending. These claims included method, system, and computer storage medium claims for mapping a combustor in a gas turbine engine. As indicated in paragraphs [0003] and [0004] of the background section of the application,

"Combustor mapping is the process of measuring operational boundaries for an individual gas turbine engine and translating this data into control schedules for use by the controller of that engine. This process is required for each engine because engine-to-engine (or,

more correctly, system-to-system) variability on maximum/minimum operational boundaries and ring flame temperature control may be greater than the allowable operating window. Each engine is required to be mapped during site commissioning to measure and compensate for this variability. Due to the drift or shift of the boundaries with time or due to significant maintenance (replacement of a combustor for example), additional mapping and subsequent control system adjustments are sometimes required during the life of the engine.

Combustor mapping is a manual, iterative process requiring the accurate observation of multiple engine parameters and the manual collection of the observed parameters. These observations must be made for many burner mode and bleed setting combinations. As a result, combustor mapping is tedious, and time consuming, with the potential of human error. In addition, special classroom and hands-on training are required to become qualified to properly map a particular engine. This training increases the money and time cost of the combustor mapping process.”

The Applicants respectfully submit that the scope of the claimed subject matter would certainly be considered by one skilled in the art to have a well-established, specific and substantial utility; i.e., an improved manner of observing gas turbine engine parameters and recording these results for use by a controller. Moreover, the Examiner originally issued a first action allowance back on October 4, 2004. At that time, no issues were raised with respect to either 35 U.S.C. §101 or 35 U.S.C. §112. Applicants therefore respectfully submit that the Examiner, at that time, recognized a well-established utility for the claimed invention and, as such, subsequent §101 rejections of the claims based on the utility requirement are improper.

Notwithstanding the above, the present amendment has rendered the §101 rejections moot by removing the language “translating the measured operational boundaries into control schedules” from the preamble of claim 1. Applicants therefore respectfully request that the same be withdrawn.

Rejections under 35 U.S.C. §112, second paragraph

As indicated above, the preamble language “translating the measured operational boundaries into control schedules” has been deleted from claim 1, thereby overcoming the first stated ground for rejection under §112, second paragraph. Moreover, the preamble more specifically recites that the operational boundaries are utilized by a controller associated with the gas turbine engine. Support for this amendment is found at least in paragraphs [0018]-[0024] of the specification and in Figure 1 of the drawings.

With regard to the terms “maximum,” “minimum,” and “nominal” as related to “ring flame temperature boundary,” the Examiner continues to take the position that such terms are indefinite, notwithstanding the prior amendment to the claim language to more precisely define the same. In any case, claim 1 is further amended to relate the maximum/minimum ring flame temperature operational boundaries to maximum/minimum ring flame temperatures to be permitted by the controller. The claims do not specifically recite what particular values these temperatures are; rather, they are intended to cover the act of establishing such boundaries to be enforced by the controller. The applicants respectfully submit that a specific numerical boundary for the maximum/minimum ring flame temperatures need not be recited in the claims themselves in order to make the same definite. As a practical matter, these operational boundaries may vary from device to device, and can change over time (see, for example, specification paragraph [0003]). Thus, a numerical definition for the operational boundaries would unnecessarily limit the scope of the claims, and is not needed to make the claim definite.

Similarly, with regard to the term “nominal,” claim 1 has also been amended to more particularly point out that a nominal ring flame temperature represents a specified normal ring flame temperature under normal operating conditions. As stated in the previous response, it is known in the engineering arts that “nominal” generally signifies the subject being “normal” or in accordance with engineering specifications. Thus, in the present claims, nominal operating temperature may be defined as a ring flame temperature that is considered to be normal or in accordance with specifications. As is the case with the minimum and maximum ring flame temperature boundaries, a nominal ring flame temperature need not be recited in conjunction with a specific numerical value to render the claim definite. Rather, the claim recites

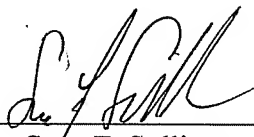
establishment of a nominal temperature, now defines the meaning of "nominal," and recites how this nominal value is determined. As such, the language clearly points out and distinctly claims the subject matter regarded as the invention.

Accordingly, the Applicants respectfully submit that the present amendment to claim 1 overcomes each of the outstanding rejections to the pending claims based on 35 U.S.C. §112, second paragraph.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Response, please charge them to Deposit Account No. 06-1130 maintained by Applicants' Attorneys. If the Examiner has any queries regarding the presently submitted response, the Applicants' attorney respectfully requests the courtesy of a telephone conference to discuss the same.

Respectfully submitted,
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